

# Heat Surveillance Summary - 1997

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The summer of 1997 was relatively normal for Missouri with one peak of high heat indexes from July 12 through August 28. The Department of Health issued the only statewide Hot Weather Health Advisory for the summer on July 25 when heat indexes reached 112° in St. Louis, 110° in Kansas City, 108° in Columbia and 105° in Cape Girardeau. The peak of high heat indexes from July 12 through August 28 accounted for 76% (176) of the heat-related illnesses reported in 1997. See Figure 1.

In 1996, one statewide Heat Warning and one statewide Heat Alert were issued. This would be comparable to one Hot Weather Health Advisory and one Hot Weather Health Warning; new terms for heat advisories were adopted in 1997. See sidebar on page 31 for new terms.

In 1997, a total of 232 heat-related illnesses was reported. This is higher than the 198 heat-related illnesses reported in 1996, but considerably lower than the 819 heat-related illnesses reported in 1995. See Figure 2.

In 1997, nine heat-related deaths were recorded. This is two more deaths than reported in 1996, but considerably lower than the 57 heat-related deaths reported in 1995. See Figure 3. Eight (89%) of the heat-related deaths in 1997 were in individuals aged 60 or older.

As in past years, the St. Louis metropolitan area accounted for a large proportion of the heat-related illnesses and deaths in 1997; 126 (54%) of the heat-related illnesses and six (67%) of the heat-related deaths.

St. Louis Operation Weather Survival issued one Hot Weather Health Watch, three Hot Weather Health Advisories and one Hot Weather Health Warning in 1997, all during the high heat index peak from July 12 through August 2. During that time period, St. Louis had 13 days

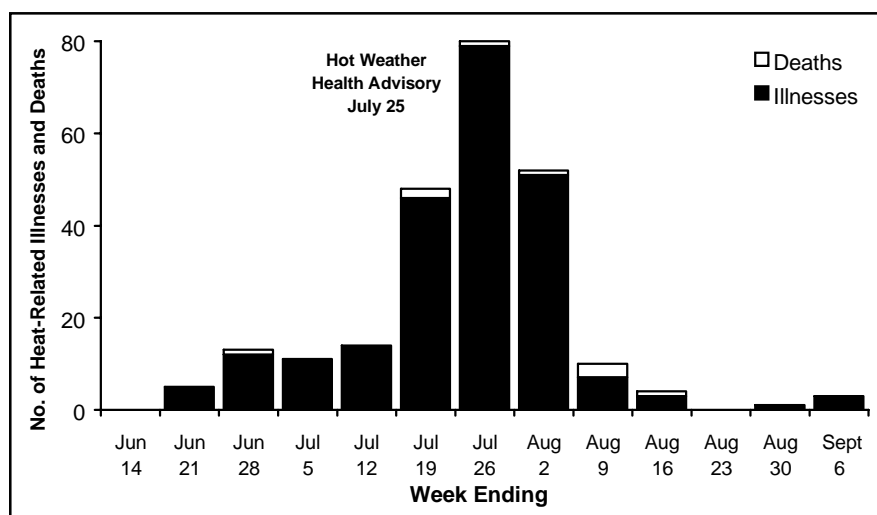


Figure 1. Reported heat-related illnesses and recorded heat-related deaths by week of occurrence, Missouri, Summer 1997.

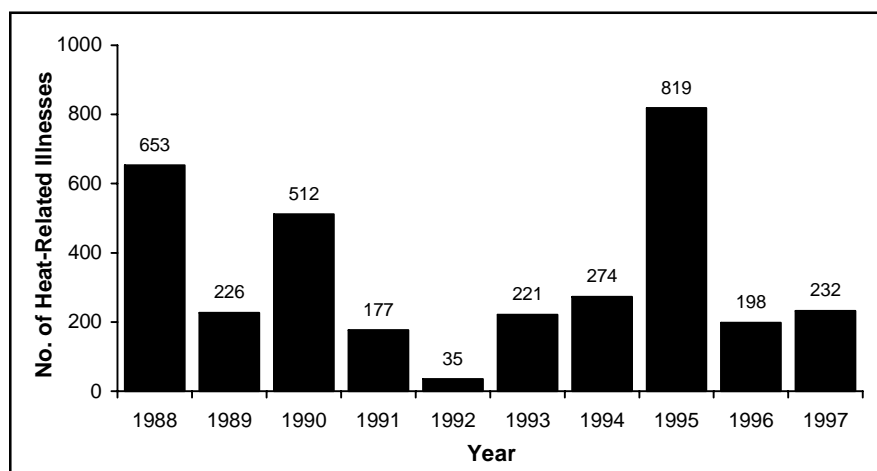


Figure 2. Reported heat-related illnesses by year, Missouri, 1988–97.

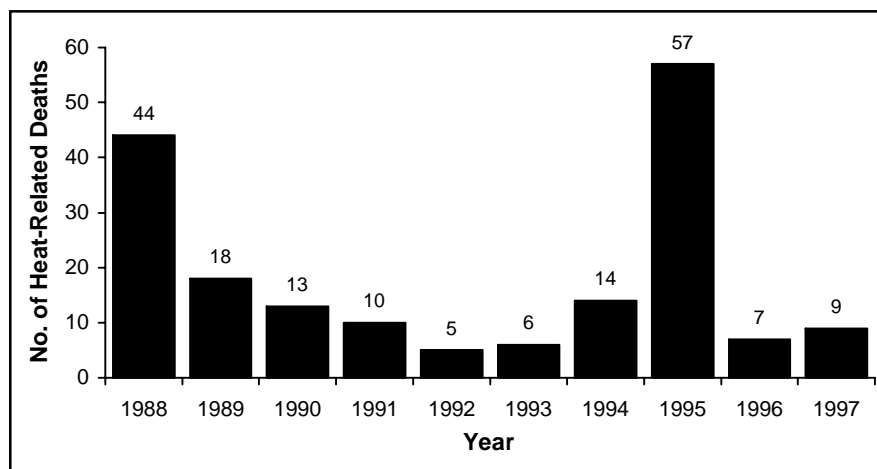


Figure 3. Recorded heat-related deaths by year, Missouri, 1988–97.

when the heat index at the St. Louis airport was 100° or higher. We estimate that the heat index in downtown St. Louis during this time period was 105° or higher. Without the diligent efforts of St. Louis Operation Weather Survival the number of heat-related illnesses and deaths in the St. Louis metropolitan area during this time period would very likely have been much higher. This coordinated effort between public health agencies, voluntary organizations, the media and others has been very effective in reducing excess mortality due to stressful weather conditions in the St Louis area.

During periods of high temperatures, physicians, nurses and hospital and nursing home personnel should give special attention to their high risk patients. Attempts should be made to provide air-conditioned environments for such patients. Health care personnel should at least warn such patients regarding their high risk and encourage the drinking of extra non-alcoholic fluids, reduction of activity and close supervision by family, friends or staff, as appropriate.

For patients who have restricted salt or fluid intake, one should consider liberalizing the daily allotments. Weekly or even daily contact with the physician may be necessary. Frequent assessment and reassessment of a patient's fluid and electrolyte status may be highly desirable, especially for those who also are taking diuretics, potassium supplements or other medications which similarly affect electrolyte balance or are affected by changes in electrolyte balance. Routine use of salt tablets is not recommended.

Reemphasize to patients preventive measures to reduce heat-related illness during prolonged hot weather:

- Avoid direct sunlight.
- Stay in coolest location available.
- Spend time in an air-conditioned place.
- Place wet towels or ice bags on the body or dampen clothes.
- Take cool baths or showers frequently.

## Department of Health Stages of Hot Weather Health Advisories

A statewide **Hot Weather Health Advisory** will be issued when heat indexes of 105° in a large proportion of the state are first reached (or predicted). The Department of Health will inform the public about the risks of heat-related illness and urge concern for those at high risk. Monitoring of temperatures and heat indexes will be intensified. An **Advisory** will not be canceled.

A statewide **Hot Weather Health Warning** will be issued when:

1. Heat indexes, measured at peak afternoon temperatures, have remained at 105° or more for two days in a large proportion of the state **and**
2. When weather predictions are for continued high-stress conditions for at least 48 hours in a large proportion of the state.

During a **Warning**, the Department of Health will encourage local health departments to assure that cooling shelters are available and also encourage other community agencies to provide relief from the heat stress. A **Warning** will be downgraded or canceled when heat indexes in a large proportion of the state fall below 105° for 48 hours and the forecast is for 48–72 hours of continued relief from heat stress.

The Department of Health will recommend to the Governor that a statewide **Hot Weather Health Emergency** be declared when:

1. Extensive areas of the state are experiencing high and sustained levels of heat stress (determined when the heat index reaches 105° for three days); **and**
2. Surveillance data demonstrate increased levels of heat-related illness and death statewide; **and**
3. The National Weather Service predicts that hot and humid conditions are likely to continue for several days in a large proportion of the state.

An **Emergency** will be canceled when the heat indexes in a large proportion of the state fall below 105° for 48 hours and the National Weather Service predictions indicate a low probability for the return of severe conditions for the following 48 to 72 hours.

- Reduce the number of layers of clothing.
- Wear light-weight, loose-fitting garments.
- Avoid strenuous physical activity and reschedule activities, such as shopping, to a cooler time of day.
- Increase intake of fluids such as water and juices.
- Avoid alcoholic beverages (beer, wine or liquor).
- Contact family or friends at least once a day.

Prompt notification of heat-related illnesses and deaths is essential for an effective heat surveillance system. If you are aware of heat-related illnesses or deaths, please report them promptly to your local health department.

Further information on prevention of heat-related illness and past surveillance data for Missouri can be obtained through the Department of Health Home Page at <http://www.health.state.mo.us/cgi-bin/uncgi/HeatRelatedInfo>.